

Abstract

Title : comparing radiographic and echocardiographic findings at patients with heart failure diagnose were rest at heart ward in booali hospital in march – September 2003.

Written by : Mehrdad Ashayer, Anari H MD, Doostkami H MD, Mahdavi A.

Address: Ardabil Medical university

Summary: heart failure is a physiopathologic state that cardiac dysfunction lead to insufficiency of blood for metabolic needs of body. one of important problems in primary approach with HF patients in urgencies is estimation severity of HF. a diagnostic and standard instrument for estimating cardiac output and ejection fraction is echocardiography, but because of high cost and unavailability for it , an easy ,low cost and available method for evaluation in all of centers is necessary .

The aim of this research is evaluation CXR reliability for estimation severity of HF .that evaluates relationship between radiographic findings and EF of patients .

Materials and methods : during this research the graphies were taken in first day of rest , in patients that EF of them were lower than 50% was observed by radiographic findings . instruments and materials were used include x-ray producer machine, radiography film for showing picture and echocardiography setting for monitoring of cardiac function with ultrasound waves.

Results : during this research 59 patients that had condition for project was examined . 53% of them were female and the other

were male . age of them were in 35 to 95 years range . in the CXR common findings were cardiomegaly (93%) and pulmonary artery hypertention was in second degree(78%) . pleural effusion in 51% was in right side and in 43% was bilateral . in echocardiography that was done , EF was in 20-45 range and average was 33.4 and 37% of patients had PAH .

In recognition of PAH ,CXR had 72% sensitivity and 18% specificity . also about reliabilityof CXR in diagnose of severe HF (EF≤35%) , findings with high sensitivity contain cardiomegaly (94%) , pulmonary arterial hypertention (75%) , interstitial edema (78%) and pleural effusion (68%) . only one with high specificity was alveolar edema (76%) . cephalization had moderate reliability. combination of 3 finds cephalization , interstitial edema and pleural effusion had 93% sensitivity and 10% specificity .

Discussion and conclusion : according to high sensitivity of cardiomegaly , pulmonary arterial hypertention , interstitial edema and pleural effusion , lack of this findings in CXR reduce probability of severe HF . being alveolar edema because of its high specificity increases probability of severe HF . because of high sensitivity of CXR in PAH diagnose it has high power to ruleout it .

Key words : CXR – sensitivity – specificity – severe heart failure